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ABSTRACT

This manual introduces basic video production techniques for use by instructors in developing videos for classroom presentations and for "make-up" classes. The topics covered include script writing, camera movements, lighting, sound, location vs. studio production, working with talent, video editing, and the design of the overall production. Several chapters contain guidelines, checklists, and/or self-tests as well as illustrations. A glossary is provided. (20 references) (EW)

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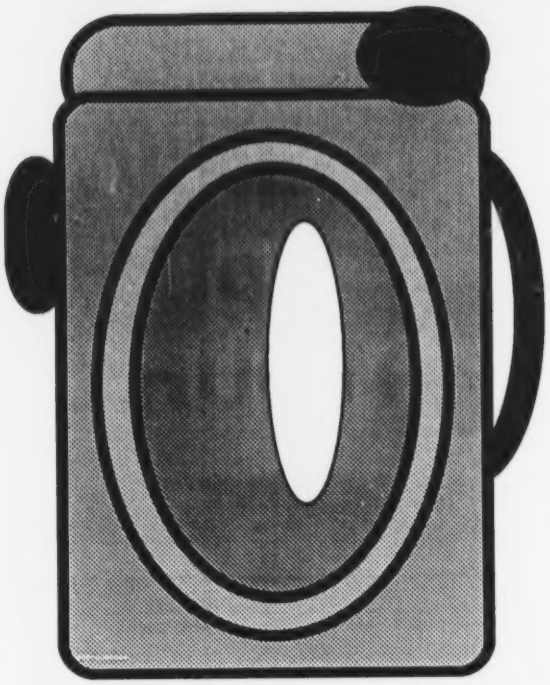
VIDEO for INSTRUCTORS



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VIDEO FOR INSTRUCTORS

by

L. Duncan Munroe and J. Price

Edited by:

Mike McClellen

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FORWARD

Video for Instructors is designed to introduce basic video production techniques, to present information on directing and producing a video, and to encourage instructors to use video for classroom presentations and develop a tape library for "make-up" classes.

The benefits of video tapes justify the effort, time, and cost. They may be used again and again, freeing instructors from repetitive demonstrations. Plus, video is there, if the instructor can't be, so no class time is lost. The tapes also are ready anytime a student needs to review a subject.

Other benefits gained through the use of video in a classroom are numerous. Among them, is a solution to the following scenario: A special guest speaker is invited to lecture a class on a subject that they will be tested on later. As the day approaches, flu strikes and most of the class is sick at home. The speaker can't reschedule. What should the instructor do? The instructor could simply set up a video camera and tape the lecture, then replay it for absent students and use it as a review for students who were in attendance.

Video is an ideal tool for instructors to clarify difficult material that often requires repeated instructions or demonstrations before students assimilate it.

Instructors can maintain a video tape library for students to review or enable a new student or slow learner to 'catch up' with classwork independently. Nothing will ever replace the personal touch in teaching, yet video tapes can be a practical teaching tool, allowing the instructor to move on to new material.

Production of video tapes for instructional purposes can be difficult, time consuming, and expensive. However, through this manual and the accompanying

video tape the practicality, usefulness, and ease of video production for vocational instructors will become evident.

Video for Instructors **is funded by San Jacinto College South through a Carl D. Perkins grant from the Texas Higher Education Coordinating Board.**

ACKNOWLEDGEMENTS

Video for Instructors could not have been a reality without the patience and assistance of the following people during the production of this manual: Dr. Naticia Petrossian, Director of the Carl D. Perkins Vocational Act for the Texas Higher Education Coordinating Board, Austin, Texas; Dr. Loanne Boudreaux, Director, Occupational-Technical Education, and other staff members of San Jacinto College South, Houston, Texas; and John Caballero, Television Producer/Director, Texas Employment Commission, Austin, Texas.

We are indebted to Mike McClellen, the editor, for his logical thinking, time, and excellent suggestions for this manual and the accompaning video tape.

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WHY VIDEO?

You may wonder, "Why should I learn about video? I'll never use it. Electronic equipment is my archenemy."

Video is the perfect visual demonstrator. People learn best when they hear information, see the information demonstrated, and are given an opportunity to use or practice it.

In this manual's Forward there is a story about a flu epidemic nearly emptying a classroom on the day of key guest lecturer, however there are times when flu or some other calamity hits the instructor, resulting in last-minute panic calls to administrators and substitutes.

Then the instructor finally returns to class and discovers that the substitute was not qualified, "just a baby-sitter." Or that the substitute was qualified, but there was no time to prepare.

These situations cannot be avoided, but results might not be as disastrous if core areas of your presentations are on video tape. A tape can be assigned for the day you are absent. Or, perhaps your administrator is familiar with your video library and can select a tape that will stimulate a class discussion following its presentation.

Appropriate video applications are as varied as the instructors who think of them:

* A class demonstration that needs to be shown in detail and viewed close up.
* Loaned demonstration equipment that can't be used again.
* A process that is difficult and needs to be reviewed, perhaps several times.
* The demonstration site is dangerous, inaccessible, or too noisy for the class.
* A post-event analysis of a technique is needed by a class or a team.

The possibilities are exciting. This list of suggestions represents just a few options. Opportunities are numerous, and, as you gain knowledge about video production, your ability to develop concepts for productions will increase.

FIRST THINGS FIRST

Using video as a classroom tool requires an understanding of the production process from an idea to the finished video tape. This section concerns when to use video and how to write a script.

There are many approaches to shooting video. Some producers believe in spontaneity and do not pre-plan. Their work takes place during post-production, and it is work.

The spontaneous approach has some advantages, but editing is more costly in time and money than a pre-planned shoot. Imagine building a house without blueprints.

Video production requires pre-planning and discipline, but how lucky for the viewers if the disciplined individual is also creative and inspired.

The Concept

An educator who has an idea for a video should begin to plan steps for a final product. First, there are questions to be answered. Is the idea a good candidate for a video production? How much time, money, and equipment will it take to produce?

What should not be video taped? Information that may be copyrighted (obtain a copy of the 1978 copyright law, Public Law 94-553), secret, or confidential. Subjects that are presented infrequently or with changing information, such as those based on current events or fads.

What should be chosen to video tape? Subjects that are presented repeatedly with information that remains basically the same for a long period of time and can be taped in under 30 minutes.

Once these questions are answered and it is determined that video tape is the best method to present an idea, there are other questions that need to be addressed.

What does the student need to know? Rule of thumb, too much information may be fascinating to the instructor, but confusing to the students. Think of a video production as the art of minimality, then thoroughly define and delineate instructional content.

How will understanding be best acquired by strudents? Will seeing a procedure cedure or various types of equipment accompanied by a commentary be an effective learning tool? Or perhaps a series of lectures could be put on video tape.

Will the presentation allow students to participate? For instance: see a procedure, attend a news event, or visit a facility. Will the subject stimulate interest and promote inquiry and debate?

Do you want to demonstrate time relationships, such as a sequence of steps to accomplish a task in construction, health science, or another trade? Does this demonstration need a planned dialogue? Or can it be unscripted and delivered as a lecture with a few brief notes?

The Script

Writing a script is different than writing for print media which allows a reader to reread until a statement is clear, use a dictionary or refer to the text to determine the meaning of a word or phrase. Written media also have visual tools such as **bold**, *italic*, underline, CAPITALIZATION, (parentheses), and a host of other written tools.

Scriptwriters must keep in mind that listeners actually concentrate on pure audio for only about two to three minutes. Everyday there is a lot of noise around people, much of which they 'tune out.'

Is the audio content viable? Does the video picture say it without dialogue? How much needs to be said with words?

Keep explanations clear and statements in language that will be understood by the target audience. If a viewer does not understand a sentence, subsequent information may be missed while mulling over the difficult information.

Script Writing

A script is a large part of pre-planning. It is to video what a blueprint is to construction.

Camera shots planned according to the set, actors, equipment, and lighting will help you stay on schedule and save shooting time.

A scriptwriter determines how long a video will be, 10 to 20 minutes is considered good. *If it's longer, it better be good!*

Your method of presentation must be decided; dramatic, comedic, documentary, lecture, or short bulletins.

A scriptwriter accommodates video's fast pace by introducing a limited amount of information in a short time period. By limiting information and video length you can give viewers the satisfaction of understanding content, with an added bonus for you: keeping the viewer's interest.

Story Concept to Video Script

To begin writing, *start writing.* Write quickly, getting your concept down at one sitting, if possible. Edit later, then simplify! Simplify!

Next, break the concept into segments, then write and number individual scripts for each segment, and include:

* Location for each scene with a detailed description of each setting and the impression it makes on viewers.

* Description of characters in each scene: dress, mannerisms, actions -- standing, sitting, and hand movements.

* A detailed explanation of any action. Movement may interfere with dialogue delivery, so allow time for action.

* Specific artwork, graphics, or special effects and their use.

* Lighting and sound requirements. Set the time of day or night, and the atmosphere or mood.

Remember the camera is you walking in and around a scene viewing it from different angles.

Guidelines

As you start to rewrite and edit a script follow these guidelines:

* Choose words carefully. Explanations should be easily understood by the target audience and not open to interpretations, unless the object is to stimulate interpretation, discussion, or brainstorming.

* Keep sentences short, simple, and direct. Use informal conversational sentences and words.

* Accommodate sound to the picture.

* Concepts should flow naturally.

Adherence to these guidelines can be tested by reading the script aloud to someone unfamiliar with the content, then delete awkward or difficult phrases. Or let someone read it to you.

A couple of pages from the script for *Video for Instructors* on the following pages is an example of script writing and notation.

Writing the Script: A Self Test

1. Review the material in this section, then write a 30-second advertisement for your area of instruction, your school, or on some other subject. Write in the following sequence:

* Write the subject of the tape.
* Write more information for a concept.
* Break into smaller segments.
* Write dialogue, action, and mood for each segment.

2. The next time you watch television, notice dialogue for each scene or shot. Take note of the length of each shot and scene. Most scenes will be very short, perhaps two to three minutes long, with shots from two to ten seconds usually.

"Video for Instructors" a working script.

CUT To: Establishing shot: WS Exterior PSI early morning.	
SUPER TITLE: **Video for Instructors**	**AUDIO**: A telephone ringing.
CUT TO: WS Interior Dean's Office with Dean at desk.	(Dean seated at desk speaks into phone, agitation grows with restless movements, silent drumming of fingers. *All 'pauses' are to listen to the other speaker, use a two beat.*)
SLOW Z-in to MS of Dean's face, phone and desk top	**DEAN**: Yes, Malone, I understand you have the flu, but who can I get at this hour for your nine o'clock? (*Listens.*) Dr. Smith, (*Pause*) teaches at the main campus. Okay, I'll call.

(Dean is obviously upset, depresses phone to disconnect, then dials)

Dr. Smith? (Pause.) I'm glad I caught you. Tim Malone has the flu. He suggested you to teach his nine o'clock this morning. (*Listens.*) You can't. You're sure? Now what can I do? (*Pause.*) You have a what? (*Listens.*) A video tape library? (*Listens.*) Yes, that's the material she had planned to cover. (Pause.) You can? I'll send a messenger over for it immediately. (*Pauses, and as if an afterthought, says*) Dr. Smith, I want to talk to you about this video library. (*Listens.*) Yes, that would be fine. Thanks.

INTERCUT shot of a hand selecting a video tape.

CUT-AWAY FOR SCENE I: CU Hand on tapes.

(Hand quickly moves along a row of tapes, selects one.)

CAMERA MOVEMENTS

Manufacturers of video cameras make many models, all operating differently. Without 'hands-on' practice with each camera, these differences make a definitive description of camera operation a difficult task. Plus, the state of the art is constantly changing and what might be described here as the newest in equipment may soon be antiquated.

This manual will not explore the camera's parts and operation of each. It will present general camera information and terms to help prepare the technical aspects of a script for production.

Portable Video Cameras

In the last decade or so portable video cameras have progressed from awkward, heavy systems requiring many other pieces of equipment, to lightweight cameras that most people can use with adequate results.

Today, many portable cameras are one system. This system contains the camera, microphone, lens, and tape recorder all in one lightweight package. Most of these are referred to as **camcorders**, and their simplicity has opened the world of video to anyone with the desire and imagination to present productions at comparatively little cost.

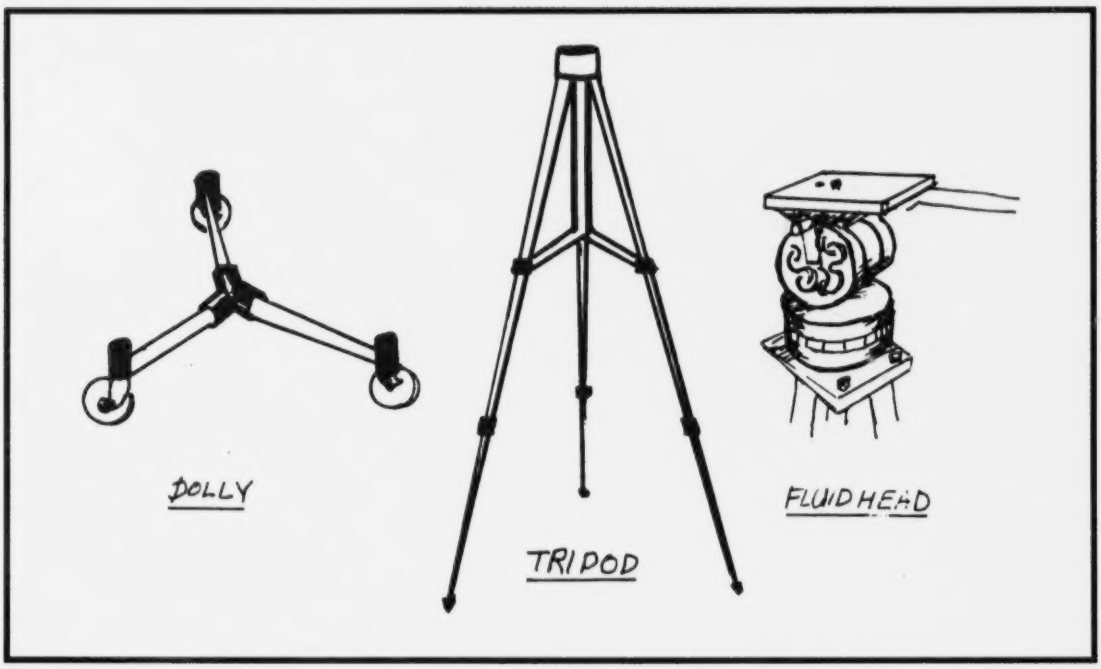
Before operating any of these cameras *read the manufacturer's manual thoroughly.* Small things, such as an improperly charged battery, or the wrong size video tape, can spoil a good prospect for a video production.

Dollies and Tripods

Although a video camera can be handheld, and often is by professional camera operators, it is advisable as a beginner to start shooting video with a camera mounted on a **tripod**, a three-legged stand.

A camera on a tripod will keep shots steady and eliminate the jitters. Jitters are sometimes caused by breathing or sudden movements that make the picture appear to jump up and down.

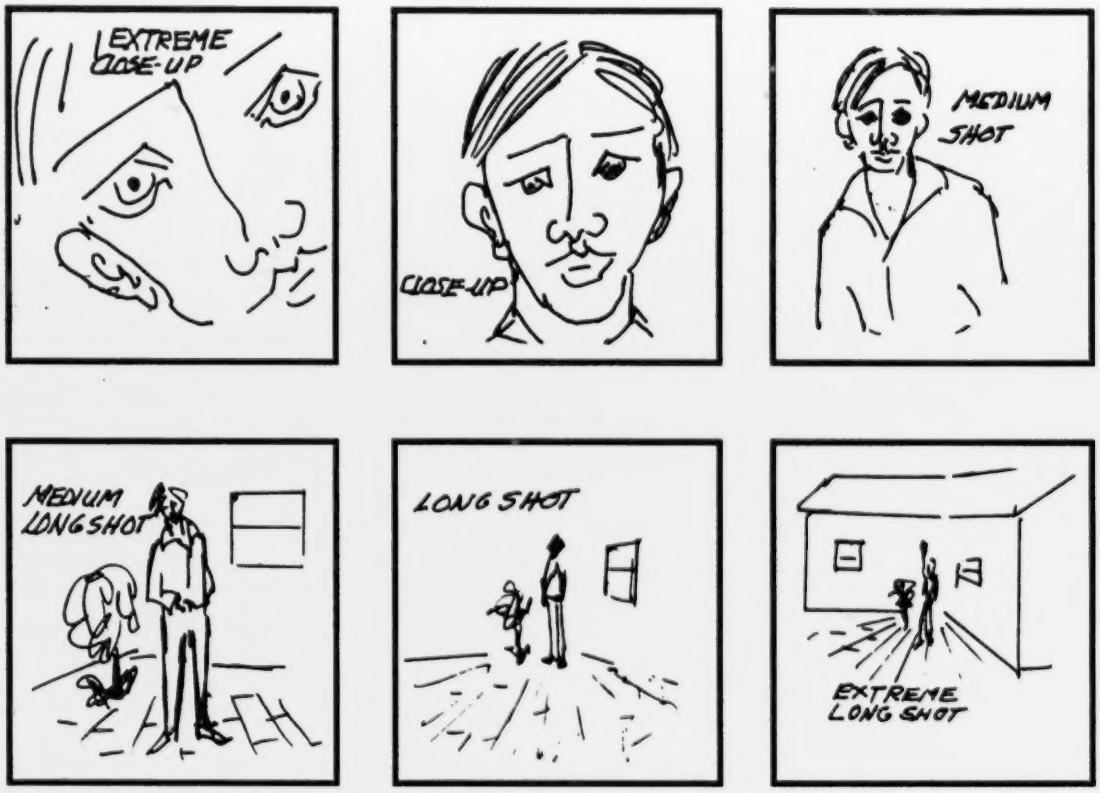
There will be times when a camera needs to move with a shot. In this case a **dolly** is attached to the tripod. A dolly, for nonprofessional use with a lightweight camera, is generally a collapsible triangular platform with wheels to make movements smooth and easy.



The Camera's Eye

Instructors deal with information that is usually historical or descriptive of a process. What a student will see of this information is determined by the camera's eye, the **lens**.

A lens is a camera's focusing system, a mechanism of many parts that detects a subject's reflected light and transmits it to an electronic image sensor chip or tube.



Through the lens, a director/instructor chooses and limits what a student will see of the subject. What is chosen is called a **shot**, that can include all or part of a subject and a background.

If a director chooses, a video tape can be one continuous wide shot of a lecturer, or, for interest, shots of the audience's reaction may be put in at appropriate times, or perhaps a close-up of the speaker.

Camera shots have names that are generally accepted by the video industry. Use of these terms will help prepare a script for production.

Shot terms vary from an **extreme close-up (ECU)** to an **extreme long-shot (ELS)**. These and other shot terms are illustrated above.

These shots can also be of more than one person and are referred to as: one-shot = one person; two-shot = two people; on up to a four-shot = four people. If a shot is of five or more people it is called a group-shot.

When shooting three or more people avoid the monotonous 'lineup' placement. Stagger your subjects at different distances from the camera, some sitting, some standing. Also be aware of framing; does a person seem to be missing an arm, or have no feet, or lack room to move into?

Shot terms will be helpful to produce a dramatic lesson. Crewmembers will use a script marked with shot terms to move the camera, deliver sound quality, and for editing.

Video is not static, subjects move and the camera moves with them using a variety of different movements that have technical names.

Some movements are made with a camera's lens. Today, most cameras have a zoom lens rather than a fixed lens, providing an ability to change a picture A zoom lens can be moved in and out manually or, in some cases, automatically to vary the picture's coverage.

Movements made with a zoom lens are called **zooms**, **zoom-in** or **zoom-out**. Zooms can be fast or slow as they change focus from a close-up (CU) to a medium-shot (MS), or the reverse.

An attachment on top of the tripod, a **head**, can hold a camera and allow it to move smoothly either horizontally or vertically. Horizontal moves are called **pans**, **pan-right** or **pan-left**, while vertical pans are referred to as **tilts**, **tilt-up** or **tilt-down**.

With a tripod on a dolly a camera can move in, out, or around a scene for more unusual angles. Dolly movements have been given names, known simply as **dolly**, or **truck, -in, -out, -left or -right**. Either truck or dolly is acceptable and understood by video professionals.

Camera movements should be used judiciously since the art of video includes the minimal use of camera movements. Too many changes from zooms to

tilts, and meaningless dollies can distract from instructional content. Use extreme close-ups and other movements only when they add to a script's content.

The most-used shot in video is the pan. Pans are augmented with special effect shots gained from a zoom or tilt or by other camera moves.

Story Board

To visualize a video script prior to taping some directors use a **story board**. A story board is much like a comic strip; it is a visual illustration of the script in sequential order, and it can carry all the dialogue with each drawing or just a part of it.

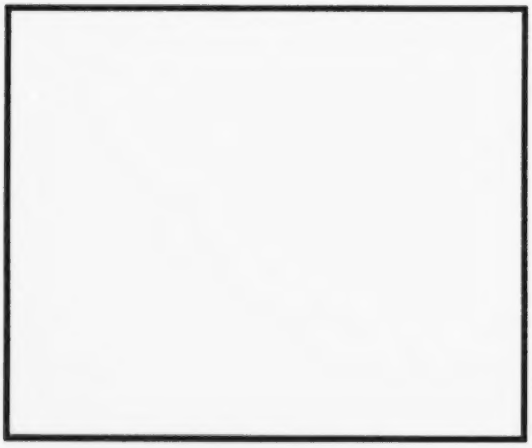
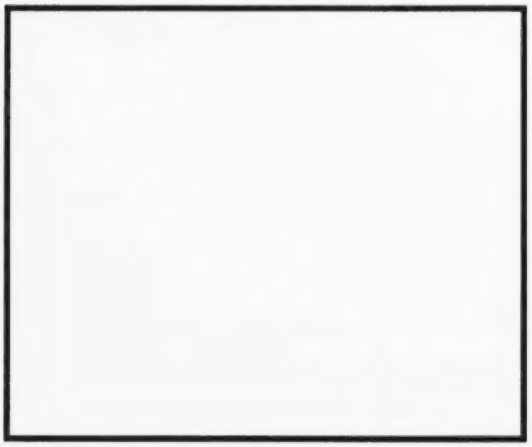
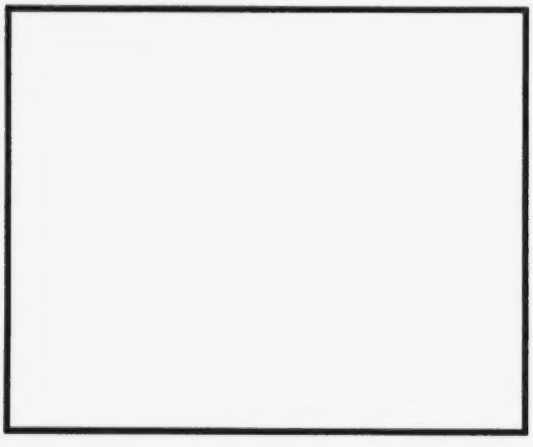
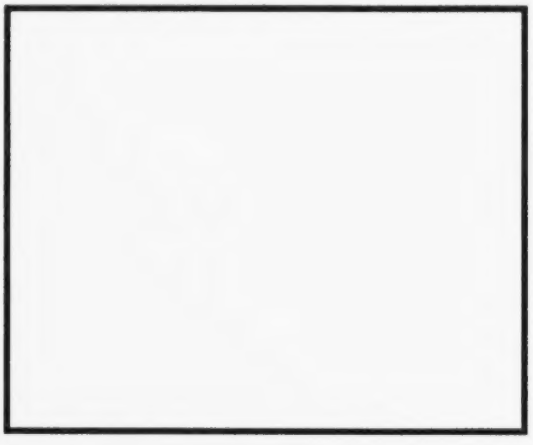
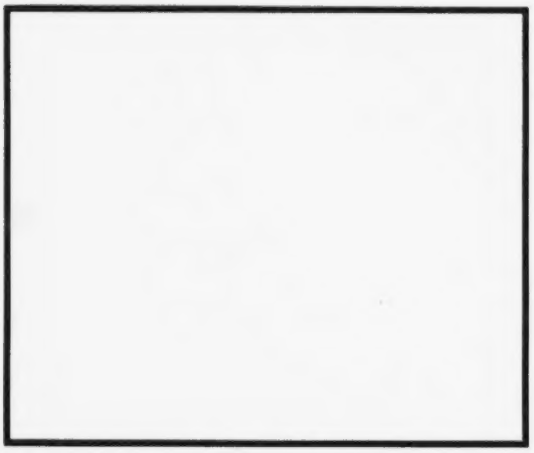
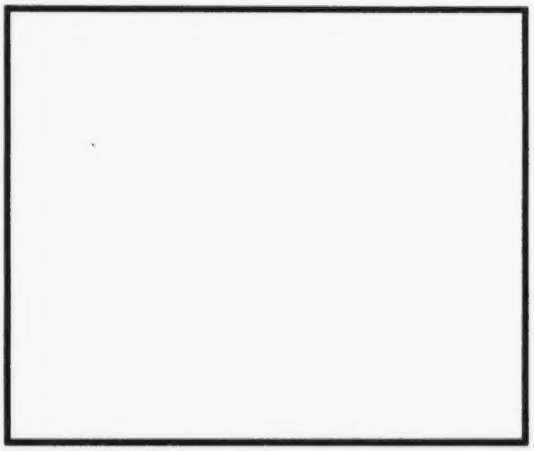
A story board is useful to demonstrate an idea to an administrator. Or to plan shots that will not be sequential but made according to locality or availability of talent and then edited later.

Camera Script Notes: A Self Test

1. Using the 30-second script, determine how a camera will shoot each scene. Using proper terms mark shots on the script.

2. Draw a storyboard for your 30-second script, using the layout provided on the next page. Stick figures will illustrate the story, so don't worry about artistic ability. You do not need to use all the squares.

STORY BOARD

VIDEO LIGHTING

Video recording depends on the amount of light the camera receives, as does photography. Many video cameras on the market today can shoot in very low light. But, good lighting design and control remains important to a good video picture.

A subject's lighting can change the mood from cheerful to depressing or frightening. Do you remember as a kid placing a flashlight under your chin to frighten a friend? This was probably your first experience with lighting techniques. The light under your chin modeled your face; it shed light on planes that were usually lit from another angle.

Video lighting is used to illuminate as well as model a subject. Video lighting is controlled so that objects are not flattened by too much light or obscured by too little.

A picture will be underexposed with too little light, just as it will be overexposed with too much light. Or, with uncontrolled lighting, strange angles may be seen, just as occurred in the 'light-under-the-chin' trick.

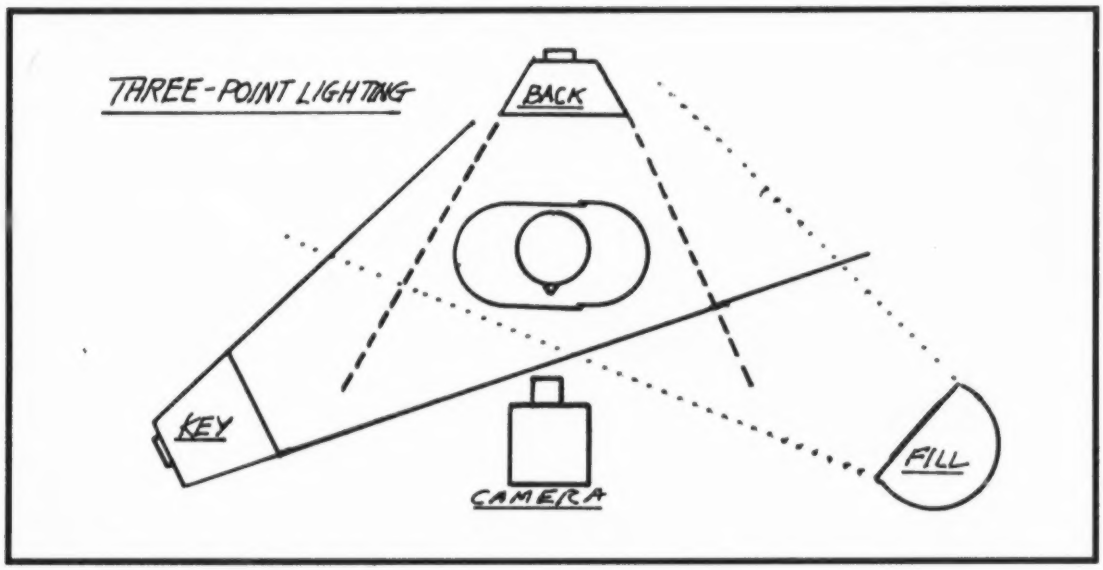
A common system for lighting that has been used for many years is **three-point lighting**. Alone, it is usually used to light one subject, but it can be repeated to light more than one subject in a scene.

Three-Point Lighting

Three point lighting, as the name suggests, uses three lights. These are named: **back-light**, **key-light** and **fill-light**.

The **back-light** illuminates a subject from behind to separate it from the background. It is placed high and in back of the subject. If the subject is a person, this light

should not fall on the face, as it will light strange angles. It is used alone sometimes to give a halo effect.



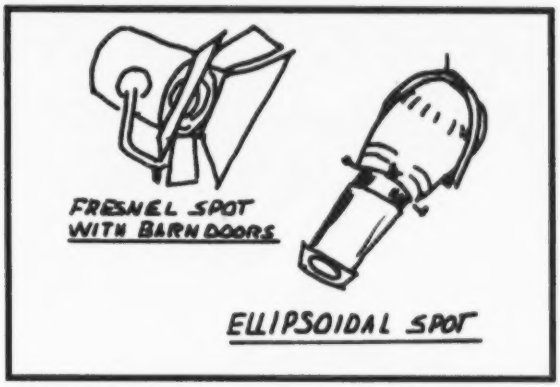
The **key-light** illuminates one side of the subject and throws shadows to the other side. These shadows should not distort or detract from the subject. This light is usually more intense than the fill-light and is placed to the side of and slightly higher than the subject.

Fill-light shades and tones down shadows cast by the key-light. It is positioned opposite and a bit lower than the key. Its illumination is less intense then that of key- and back-lights.

Three-point lighting is an ideal way to light all subjects in a scene, but it is not always practical. However, if you are familiar with this lighting system's results, then you will know what to strive for when lighting your subjects.

Studio Lights

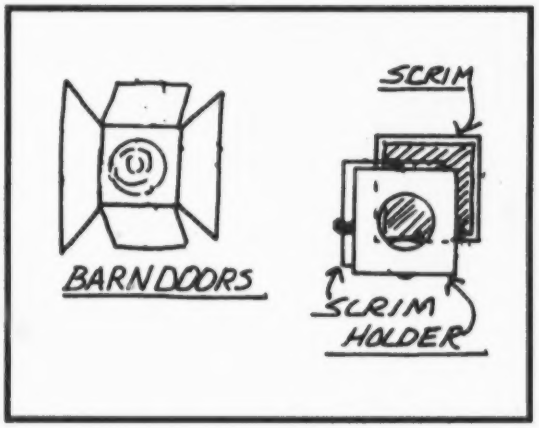
Knowledge of lighting instruments regularly used on location and in studios allows you to have more choices in your lighting and improve the effects. Predominantly, two types of instruments are used: **soft-lights** and **hard-lights**.



Hard-lights, usually spotlights, are directional lights used as key- and back-lights. For a dramatic effect a single spotlight projection isolates the subject and makes the subject appear in limbo.

Spotlights project distinct hard shadows. This illumination is controlled by several means: a light's placement in relation to a subject; a dimmer switch (much like a household dimmer); or with several attachments made for this purpose, such as **barndoors** and **scrim holders**.

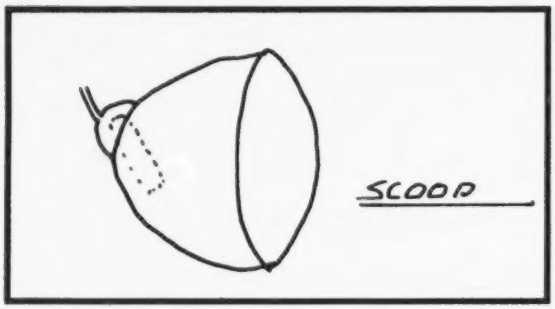
Barndoors are four hinged flaps on an instrument attachment that can limit a spotlight's illumination or turn it into a long sliver or a small or large square.



The **scrim holder** is an attachment that principally holds a fiberglass cloth to soften the light, or a piece of metal, a **cookie**, with a pattern cut in it, such as a tree's leaves, that change the shape of a projected light and soften it.

Another instrument used to diffuse and soften light is an **umbrella**, covered with a white heat-resistant cloth. It operates in reverse of a rain umbrella. A light focused into an umbrella is diffused, and reflected back past the light source to a subject.

Soft-lights are used to modify hard edges and reduce dark shadows. Examples of soft-lights include **scoops** and spotlights with scrim holders.



A **scoop** is shaped much like an ice-cream scoop. It diffuses harsh shadows made by a spotlight. Although it is not as intense or as powerful as a spotlight, it is often used to light backgrounds.

Scoops vary in size from a diameter of ten inches to thirty-six inches or larger. Large scoops are often used alone for lighting outside the studio most effectively.

Natural Lighting

Aesthetically, available light is probably the best light to employ, whether indoors or outdoors. It is the situation's natural lighting, understood and accepted as normal by viewers.

Most new cameras shoot in low light, but it is best to test this light. Compare it to a classroom's light. If it provides light to read by, it is probably adequate. Make it a rule to light subjects with as much light as you can provide without overexposure. Indoor video pictures often lack the clarity of sunny outdoor video. This is because indoor light alone is not bright enough, it is just adequate.

Many occasions will arise when natural lighting must be improved. There are procedures that can enhance your light sources, such as:

* If a subject's face appears flat and featureless, use one or two large pieces of white or silver coated paper or boards, known as **reflectors** (reflectors can be purchased). These can be handheld or attached to a light stand. Reflectors should be moved around to reflect more of the natural light back to the subject.

* Reflectors can be combined with a lighting system or with one light to produce a good lighting effect.

* Sometimes, if the subject is moved slightly it can change the light to a more suitable level.

* Subjects should not be placed directly under a light as this will create strange shadows.

* Distortion and overexposed pictures can be caused by direct sunlight. Carefully choose the time of day for scheduling taping. Most directors prefer early morning or late afternoon lighting, as sunlight is usually too intense from around 11 a.m. until about 3 p.m.

* A light mounted on top of a camera, frequently used by news camera operators, can add extra light. These instruments are small and lightweight, but throw harsh shadows. Delays can be caused by batteries that are not charged.

* Remember that if one part of a picture is brightly lit, other parts of the picture may be faded and underexposed.

* Video lights require about 600 watts each, so two instruments will require a single 12-amp electrical circuit board.

Lighting: a Self Test

1. Determine if you will need extra lighting equipment and make note of any on your 30-second script. Decide on lighting instruments, any special attachments and where the lights will be placed.

2. Study lighting on television shows and movies.

THE WORLD OF SOUND

Often little attention is paid to sound in noncommercial productions, but it can make or destroy a good production. Audio must be taken seriously, as it influences acceptance or rejection of a video tape.

In nearly 15 years, television sound has moved from a small three-inch mono-speaker to stereo speakers. Most likely your productions will not demand stereo quality, but you will want sound that is clear and understandable, that does not detract from the picture's quality or content.

As sound is an extremely technical field, this manual presents information to guide the amateur, not to make master sound technicians.

Microphones

Most video cameras will come with a microphone. This microphone will be adequate for many jobs. If a production requires more than one mic, don't plug another mic into the camera's external mic jack to get dual sound, as the internal mic will automatically cut off on most cameras.

If a scene requires more than one mic, a **mixer** should be employed for the best sound quality. A mixer electronically controls the sound level of several mics at one time.

There are basically two types of microphones, **directional** and **omnidirectional**. Each of these will collect and produce certain types of sound. They both have advantages and disadvantages.

The **directional** microphone picks up sound that is directly in front of it in various patterns. Some receive in a heart-shaped pattern, called **cardioid** mics.

Other directional mics have different patterns down to uni-directional mics. An example of a uni-directional mic is a **shot-gun** mic, which has a very narrow sound pattern, but is excellent to select one voice out of a group.

An omnidirectional microphone picks up sound from in front and in back. It can also pick up a lot of unwanted sound, but can be used to record small groups.

Video Sound Check List

A few audio hints and a check list for avoiding and solving sound problems follow. They cover several facets of audio, including ambient sound, sound that the ear ordinarily compensates for to hear selected sound, but which can overpower the planned video sound.

* Prior to taping examine the microphone. Is it plugged in? One of life's embarrassing moments can be when the tape turns out to be silent during playback of a perfect performance

* Most microphones need a battery to operate. Become familiar with the manufacturer's instructions so you will know the battery size and always have extras. Another benefit of reading the manufacturer's information is that it will probably help you produce better sound.

* If you have a camera-mounted microphone it may pick up camera operating noises. To avoid these sounds acquire a microphone extension cable and adapters to fit your VCR or camera's external audio outlet to distance the mic from the camera. If you do keep the camera-mounted mic use controlled breathing to avoid having that sound recorded.

* If a low hum is detected, separate electrical cords that are near or crossing audio cables. Florescent lights can also produce hums.

* Heating and cooling systems can produce sound problems. Often this equipment needs to be turned off during recording.

* Most recording will not be done in a studio, so be aware of external sounds: cars, conversations in another room, trains, and planes. These sounds can distract a viewer from the planned audio.

* Generally classroom acoustics are not the best and can cause sound distortion. One way to correct this is to devise a **baffle** to boost sound quality. A baffle is a board or padded screen which can be cupped around or attached to a mic to help reduce reverberations and add depth. Cloth hung around a room can also baffle sound and improve its quality.

* It is important to be alert to unintended sounds made by a subject, such as pencil tapping and shuffling paper. These sounds are amplified by a microphone.

* If two or more mics are used, check for sound balance. An example of unbalanced sound is when one of two speakers placed close to each other seems much louder than the other.

* If there is a problem in picking up sound, move the mic closer to the source.

* If you plan to use music in your video be sure to check on copyrights. There may be more than one copyright attached to a piece of music.

Simple Sound Test

A professional sound test examines every aspect of the sound quality and loudness by using an elaborate sound board with meters. However, obvious imperfections can be detected with earphones attached to a camera's phono extension during a tape playback. Earphones can be purchased for under $10.00.

The more you listen to tapes the more you will begin to distinguish between poor and good sound quality.

Sound: A Self Test

1. Note any special sound requirements on your 30-second script.

2. The next time you watch television or go to a movie pay particular attention to the following details:

   * Listen for ambient sound.
   * Is there a noticeable change in the audio quality or sound with scene or shot changes?
   * Is the audio level correct for the scene? Is it balanced?
   * Note any special sound effects or transitions using sound.

LOCATION VS. STUDIO PRODUCTION

When choosing a site to record a production you will either select a studio or a location. This section will discuss some negative and positive aspects of both sites.

Shooting On Location

Most instructional tapes will be taped on location. In video taping, anything outside of the studio is on location, whether it is in a classroom, a hospital operating room, or a football field.

As a rule, location shooting is less expensive than trying to build a set in a studio. The location is real! Today's audiences are accustomed to realism. Location shooting provides a sense of identity and lends credibility to a video tape.

A director may encounter problems on location. Many things that are under a director's control in a studio are no longer as controllable. Elements such as sound from traffic, plant whistles or school bells, passer-by curiosity, or lighting may all become problems.

On location the director must gain control as quickly as possible, another reminder of the importance of pre-planning. If pre-planning is poor, control is crippled.

Today's technology has made location shooting simpler than it was in the not too distant past. Previously, costs of location shooting were financially prohibitive for nonprofessional producers. Vast amounts of equipment had to be transported from the studio, set-up, and then struck and returned to the studio.

New video equipment now makes it possible for an amateur to shoot quality tape. Cameras are lighter weight, require less light preparation, and are easier to operate.

'State-of-the-art' equipment may not be available. You may have to bring studio equipment to the location. In this case, you will need to determine which is less expensive and time consuming, studio or location.

Location shooting will require that certain elements are considered prior to and during shooting. These elements include:

* Prevailing weather conditions: winds, moisture, and temperature.
* Crew training and knowledge of equipment operation, their understanding of equipment and personal safety rules.
* Plan shots according to the location size. Plans must include acoustics, angles, and available light.
* To avoid viewers' confusion over location, plan an establishing shot which will quickly communicate where the subjects are located.
* Obtain written permission to use a site, which will protect you and the school from litigation in the future. A sample release form is found at the end of this section.

Recording In the Studio

Television studios are ideal for control, if one is available. In a studio, set and background selection may be limited, but greater control can be obtained over lighting, ambient sound, sets and backgrounds. Equipment is ready, and expert help is available. However, cost may be a factor, so, again, pre-planning will help keep the budget in line.

Campus studios may be run by one person who assumes all duties of a large studio crew. This individual probably has several years of video production experi-

ence. Trust this person to have the experience and expertise to make your video look as professional as possible.

The following checklist and suggestions will help with pre-planning for a studio or location shoot.

Production Pre-Planning Checklist

* Discuss all sound cues with talent and crew. Mark cues on scripts.
* Secure **props,** mark and place them in each scene. (Props are anything that the talent uses with hands: pencils, paper, phones, etc.)
* Meet costume requirements, mark costume changes on the script and allocate time for them.
* Plan lighting set-ups with any extra equipment ready for scenes that may require special lighting. Allot set-up time.
* Check audio equipment, all cables, extra mics, or other equipment so they are working and ready for each scene.
* Check camera equipment, secure any additional equipment that may be needed for particular scenes prior to the shooting day.
* Charge batteries for all equipment and have extra batteries available.
* Acquire sets and set decorations. Allow time for changes.
* Tell those who need to know of any changes in script, lighting, or sound.
* Distribute shooting schedule to all crewmembers.
* Secure talent or location releases or temporary permits that may be required by a city or county.
* Make crowd control arrangements.
* Hold full equipment and costume rehearsals for actors and technical crew.

Additions may be made to this list as you work in video taping and find items that you want to include in your own checklist.

Location or Studio: A Self Test

1. Decide on locations for your 30-second script, and justify why each was chosen. Base the justifications on money, time and skill.

2. Watch movies and television and look at sets, locations, and how locations were established.

SITE RELEASE

FOR VIDEO RECORDINGS

PRODUCTION: _____ **DATE:** _____

Without further renumeration I, _____, sole owner of the real estate located at _____, grant permission to _____ to video tape or photograph any portion of said property in connection with the stated production in any manner for any lawful purpose on the date(s) of _____. I waive all rights to the final product or any other material released or written in conjunction with the aforementioned production or any manner in which the above specified production may be used. I agree to hold _____ harmless for any liability to others or this property arising from use of this property for the stated production.

I HAVE READ THIS AGREEMENT PRIOR TO SIGNING BELOW.

Signed: _____

Address: _____

_____

Witness: _____

Witness: _____

WORKING WITH TALENT

Students, other instructors, guest speakers and possibly you will be **talent** in most of your productions. The use of fellow instructors and students can be a source of pride for an institution. However, this can backfire if you and talent are not properly prepared. This section will help to get the best from the talent and make them look their best.

Before beginning production, get the talent to sign a release form, such as the one found at the end of this section. If it is used, have a lawyer review it to ensure that it meets the school's requirements.

Makeup and Dress

When working with amateur talent it may be necessary to suggest appropriate clothing and makeup for video. Both should be simple and not faddish.

Clothing for men and women should be simple. Patterns, stripes, and certain stripe-like designs, such as checks, should be avoided. This type of pattern may seem to oscillate when video taped. (This can also be true for other verticals on a set, for example venetian blinds.)

Most non-intense colors are acceptable. If the colors are too bright or white they can distract from the video content. Bright colors are often faddish and can age a video. They can also cause camera problems.

White was once taboo, because it reflected too much light back to the camera causing a **burn-in**. A burn-in causes the camera to temporarily carry a spot on the screen. This is similar to spots that occur in your vision if you stare at a bright light too long. (A burn-in can also develop if a camera is aimed at a studio light.)

With many new cameras white is not the problem it once was. However, with automatic focusing white clothing or other white items on a set can cause the rest of the picture to be underexposed or too dark. If talent is to wear a costume, specify colors and describe styles in detail.

Talent Rehearsal

Rehearsals make talent look and sound better and help them become more relaxed during the performance. Although, amateur talent may prefer not to rehearse, it is up to you to explain to them that rehearsals will be required; only hospitalization, death, or a meeting with the department's administrator are acceptable excuses for missing a rehearsal.

No matter how familiar talent may be with the presentation material, almost everything gets confusing under the glare of lights or while in front of a camera.

Sometimes people resist rehearsals because they do not realize the importance of the video tape. Explain that it will be used until the material becomes outdated, and that the target audience is students, who are probably the most critical audience.

Make an informal recording of the talent's first rehearsal. Do not use lights and other equipment, just the camera on a tripod. Allow talent to view this tape alone; most performers will pick up on any annoying mannerisms or delivery problems and make corrections without comments from you.

Most people begin to relax after a few rehearsals with equipment set-ups, and the equipment no longer intrudes into the presentation.

You must transfer some of your enthusiasm to the talent. Pulling the most from talent requires patience and a knowledge of their energy and time limits.

If possible, two to three days before the final taping, hold a complete rehearsal with costumes, lighting, audio, cameras, props, and sets. This will present an opportunity to make any last-minute changes.

Talent movements are **blocked** during full rehearsal. Blocking is the process of walking through a scene and deciding where talent will be positioned for the camera during the final taping.

Talent During Recording

If pre-planning has included a full talent and technical rehearsal, final recording of the script should run smoothly.

However, the anxiety level for crew, talent, and the director will be high and problems may arise. Sometimes 'Murphy's Law' seems to apply to video taping more than it does to flying. So be forewarned, "...if something can go wrong it will."

Talent should be alerted that they may have to stay on the set longer than anticipated by the production schedule.

Video lights, equipment, and microphones are distracting, therefore it is important to keep talent isolated from crew confusion until they are on camera.

Sometimes you might want to throw away script dialogue and strive for a more spontaneous sound and look. Most information has been memorized during rehearsals. Just be certain that nothing important is left out or meanings changed.

Assure talent they are doing a good job. Don't expect recitation of pages and pages of dialogue, cut long segments into shorter segments.

Here are some other tips to help talent and improve your production during shooting:

* Discourage talent's use of eyeglasses, they often produce a glare.
* Voices for audio should be normal conversational pitch. This will help with sound mixing and balancing.
* Plan on reshooting scenes several times to get dialogue correct.
* Keep extra makeup on hand. Various tones of base and rouge or blush can help a performer's face to not look flat or washed-out under the intense lighting.
* Transparent powder in an old sock will help take a glare off a performer's face or head. It is lightly patted on, then excess powder is dusted off with a makeup brush.

- For costume repairs, have on hand scissors, needles, and assorted colors of threads. Transparent or masking tape, bobbie pins, staples, or straight pins can also be used for quick costume or set repairs.
- If possible, have an iron and ironing board near to keep costumes looking fresh.
- A can of grey spray paint or dull varnish finish can reduce glare on props and other objects on the set.
- Include rehearsals on the production schedule; stick to this schedule as much as possible.

Additions will be made to this list with each video recording you produce.

Working with Talent: A Self Test

1. Describe costumes and clothes you want each character to wear in your 30-second tape. If costume changes are required note these on the script.

2. Concentrate on makeup and costumes while looking at a TV show. You might look at one show two or three times, focusing on one production area each time. By looking at the successes of others you will gain more knowledge about production to help your own tapes.

TALENT RELEASE
FOR VIDEO RECORDING

PRODUCTION: _____ DATE: _____

Without further renumeration, I, _____, grant permission to _____ to video tape, record or photograph me in connection with the stated production in any manner or form for any lawful purpose on _____.

I waive all rights to the final product or any written material produced in conjunction with this video production or the usage of the production. I agree to hold _____ harmless from any liability to others or me in conjunction with this production now or in the future.

I HAVE READ THIS DOCUMENT PRIOR TO SIGNING BELOW.

Signed: _____ Date: _____
Address: _____
_____
_____
Witness: _____ Date: _____

Witness: _____ Date: _____

VIDEO EDITING

Editing is the process of putting scenes in sequence, following continuity of sound, subject movements, and lighting changes, while eliminating poor quality shots or good shots that do not add to content.

There are basically two different methods for editing a video tape, **live editing** and **post-production editing**. Live editing is performed at the time of recording through transitions from one shot to another. This method can help reduce cost and avoid editing jumps.

Post-production editing is performed after the production is completed. A combination of these two methods may be the most practical editing approach.

Live Editing

Live editing is usually less expensive but requires extensive pre-planning and preparation. Live edit planning requires calculation of shots in detail for sequential shooting.

During live editing, ideally each shot is reviewed on a **monitor** or TV set. A monitor is a video set manufactured for professionals with special jacks for connecting studio sound and VCR for playbacks and editing purposes. Most monitors do not receive commercial television stations.

After viewing a shot on a monitor a decision is made whether it's a "keeper" or needs to be reshot. If a scene needs to be reshot the tape can be backed up and the scene recorded over the first recording.

If electronic switching equipment is available during taping, it will allow inclusion of special effect transitions from one shot to another. These can include **wipes** and **dissolves**. Dissolves are more popular today than wipes.

A wipe is much like an automobile's windshield wipers. On one side of the blade is a picture while another appears as the first is wiped off. Wipes were popular in the early days of movie production, but today they are seldom used in drama, and only occasionally in comedy.

A dissolve is the process of having one scene diminish while the next begins to appear on top of it. Both scenes are seen simultaneously at one point during the dissolve.

A crude, although effective, dissolve can be produced by defocusing the camera at the end of one scene and restarting the camera for the next scene either in focus or out of focus. There are several variations on this technique.

Segue or **cross fading** is a dramatic transitional effect achieved by keeping a scene on while the audio fades, followed by sound from the next scene's sound appearing before the picture is seen.

Post-Production Editing

Studio production editing time can be expensive, so pre-planning is essential.

A director can reshoot a particular scene on location or in a studio repeatedly, then choose the best 'take' later during post-production editing.

Studio editing is done mechanically with editing equipment that may be very elaborate and complicated, often requiring several studio technicians. The expense of this type of editing may exceed your budget, but your school may have an **editing controller system.**

An editing controller system, although basic, can be used by one person and is not as costly as a more elaborate system. It usually consists of five pieces of equipment; two video cassette recorders, two monitors, and a controller.

During this editing process one VCR plays the original tape while the operator chooses where edits will begin and end. The edit points are recorded, then the

edited version is transferred to the other VCR. This process continues until a complete **master tape**, is produced. A master tape is the final tape with all scenes edited, sound, and graphics completed. It is the tape that all other tapes are reproduced from for distribution, saving the master to reproduce more tapes if necessary.

Editing is a skill. Like many other areas of video production it takes time and practice to acquire that skill. The more tapes you produce and edit the better you will become at editing.

Editing: A Self Test

1. Study your 30-second script, mark edit points, and identify if these will be straight edit cuts. Live or post-production?

2. Become familiar with edits by watching television or film. Can you tell whether the edits were done live or during post-production?

POST SCRIPT: DESIGN

Part of the joy of video production is preparing a beautiful picture by adjusting the lights for the right mood, finding the right props, or designing costumes that establish a period or mood. Design has not been discussed very much in this manual. This is because these skills vary from one individual to another. They can grow through study, comparison, examination, and training.

Design, good or bad, is a part of every aspect of video production. It is found in costumes, lighting, makeup, sets, props, shot selection, editing, and many other areas.

To gain a good sense of video design, select appropriate mentors for the various aspects of video production. If you decide to emulate a style, choose a successful practitioner such as **M*A*S*H* 's rapid-fire dialogue or the cinematography of an award-winning movie. Commercials are also good to study for special effects, fast-paced action, and minimal use of dialogue explanations.

There are many TV shows as well as other forms of art to scrutinize to gain a better sense of design and production techniques. If possible, watch award-winning shows and movies. Determine what it is that makes one comedy or drama more successful than another.

Observe lighting techniques that dramatize, simplify, or emphasize.

Some broadcasting systems produce shows that teach or present historical information, an objective similar to an instructor's. Many programs employ demonstration methods to teach a technique or a process. Others use unusual or dramatic approaches to help keep the viewer's interest and to instruct or present infor-

mation. Most of these productions have a high standard for design and technical excellence. It is this demand for good overall quality and design that helps these programs get their message across to the public and remain popular long after their production.

Design, good or bad, is up to you.

GLOSSARY

AUDIO DUB: Erases an old sound track from a video tape and lays down a new one on previously recorded tapes without erasing video picture.

BACK-LIGHT: A light hung high, usually shining behind the subject; sometimes produces a halo effect and/or separates the subject from the background.

BALANCE: Either an audio or lighting term. In audio generally a term signifying texture, loudness, complexity of two or more simultaneous sounds. In lighting defines the depth of shadows as compared to light.

BRIGHTNESS: *Luminosity* - The measured quantity of light reflected from the subject to the camera; measured on a light meter.

CARDIOID MICROPHONE: A mic with a limited directional pick-up in a heart-shaped pattern in front of the mic with little left or right pick-up.

CAMCORDER: Combination of a video camera and recorder in one instrument.

CHROME-KEY: An electronic process that is color separation of the subject from the background (usually a blue hue) allowing another background to be electronically inserted.

COOKIES: *Cookaloris* - a cut-out pattern, generally metal, that can slip into a light attachment; projects a mood on the subject or creates an image on the set.

COLOR-BARS: Test signal projecting colors arranged horizontally in descending order of luminance; from left to right: yellow, cyan, green, magenta, red, and blue.

CONTRAST: Adjustment controlling the brightness difference between black and white portions of the picture.

CONTRAST RANGE: Subject brightness range; ratio of darkest and lightest tone in a scene that the camera can accommodate, while reproducing quality intermediate tones as well.

CROSS SHOT: A camera viewpoint that is not straight on to the scene, but shot at an oblique angle.

CRUSH-OUT: Condition causing tones to merge; light grey may become white, or dark grey may become black.

CUT: The simplest edit transition; an immediate change from one scene to another.

CYAN: Blue-green hue, minus red.

DEPTH OF FIELD: A distance over which a scene is acceptably sharp when focused at a given point.

DISSOLVE: Mix or Lap Fade, one of the common optical transitions from one scene to another, one scene fades-in as another fades-out.

DOLLY: To move the camera in or out of a scene; or a platform with wheels used to move a camera.

DUB: To make a copy of a tape by re-recording on a new tape.

INSERT EDIT: A new scene is recorded between two existing scenes, electronically. Attributed with clean in-going and out-going splices.

KEY-LIGHT: A light that illuminates and models a subject. Generally a type of spotlight.

MAGENTA: Red-blue hue, minus green.

MARKS: Chalked floor marks to indicate an object's or a talent's position. Made during blocking to allow exact repeating of a movement.

MASTER TAPE: The first tape produced after all edits have been made and graphics added. It is the finished product from which all other copies are made.

OVEREXPOSED: Picture tones are generally too bright.

PAN: Swiveling a camera to the left or right.

PROPS: Anything held or handled by talent.

PULLING FOCUS: Focusing or fading from one subject to another in the same shot.

RE-TAKE: *Re-shoot* a scene ordinarily for improvement.

SCOOP: An ice cream scoop-shaped lighting instrument. Used to light backgrounds or soften shadows.

SCRIM: A piece of fabric or other translucent material placed over a light to diffuse the intensity.

SOUND MIXER: An electronic device for controlling two or more sound inputs.

SPOOLING: Tape rolling from one reel to another without being in a moving mode on an editing deck or VCR.

SPOTLIGHT: a focusable light, usually the strongest used to illuminate a subject, the key-light.

STORYBOARD: Illustrations depicting scenes and shots in sequence.

TIME BASE CORRECTOR: An electronic device that boosts the speed of a tape's signal to match another signal for editing purposes.

TRACKING: Electronically phasing a video track to the rotating head of a recorder or playback machine.

UNDEREXPOSED: Picture tones are generally too dark.

VIDEO MONITOR: Displays a video signal, similar to a television set, used by video production personnel to keep control over taping.

WHITE BALANCE: Engineering adjustments for video color balance. White reflects all colors equally; if it is balanced all other colors should be true.

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